3AI project report - January 6th, 2014

# Objectives:

During this period, I had to finalize my work by finishing the reading of the book I started the period before (Fuel Injection, by Daniela SIANO).

In addition to the reading, I had to end my project my making a my own video explaining any mechanical system in English then see if it’s as comprehensible as I would have liked to.

# Activities:

## Reading:

As said, I continued my book’s reading during this period without respecting any planning or schedule.

This time’s reading wasn’t as easy as the last time’s one as the chapters I had to red this time were a very technical ones and required a high level thermodynamics and hydromechanics qualifications. This is due to the fact that every chapter of the book is written by different authors; this means that every one of them has a different approach.

The only way for me to deal with that was to try to understand basically the meaning of was is said and especially understand the technical solutions chosen and the reasons why they were. For example: The choice of the input pressure in function of the discharge coefficient variation. I didn’t understand all the calculation steps but I understood that the pressure and the mass flow have a huge impact on the discharge coefficient which means that the manufacturer should pay attention to the pressure and mass flow precision.

There was also a second problem, there were a lot of technical terms and this time in opposite to the previous one, I wasn’t always able to figure out the meaning of the terms just by reading the sentence but I had to stop many times and check it out on Google translator or Wikipedia.

At the end, I would say that I don’t master every detail of what is said in the book but that I understood it as a whole.

## Video making:

Before starting, I had a small problem: How to make this video? Because by taking myself on video, I won’t be able to explain anything without graphs, schemas and images. So I decided to simply make a video of the graphs and images and combine it with a sound record of me explaining.

The challenge for me was to realize this video without using any translator and not prepare any text to read during the voice record. What I’ve done is watching step by step the video and recording in parallel of watching the video to have a perfect synchronization.

I spent a lot of time repeating and changing the voice records because of the small mistakes I did. Still, I am proud of the result I have got at the end and estimate that I am able to have a correct conversation about mechanics.

First of all, I had to find a software to use to make the video. The simplest according to the forums is “Windows movie maker”. Afterwards, I had to find a subject to talk about. The best in my opinion was to present the 4 stroke engine as the main subject of my readings concerned this point. Maybe that would help the people who would see the video understand the choice I made by choosing this subject.

For finding the videos that would help me composing and making mine, the easiest is YouTube. This is why I used [www.telechargervideoyoutube.com](http://www.telechargervideoyoutube.com) to download the video from it.

To see the video, use the link bellow:

<http://www.youtube.com/watch?v=C-TKTNDmudM&hd=1>

# Resources:

* FUEL INJECTION – By : Daniela SIANO
* <http://www.telechargervideoyoutube.com/>
* <http://www.youtube.com/watch?v=JebEbOYSSd4&list=PL9F14C769E72C1547&index=10>
* <http://www.youtube.com/watch?v=NA2_4mGrfpY&list=PL9F14C769E72C1547>
* <http://www.youtube.com/watch?v=GkdHDgxzETQ&list=PL9F14C769E72C1547&index=2>